Distributed by:

JAMECO® ELECTRONICS

www.Jameco.com ✦ 1-800-831-4242

The content and copyrights of the attached material are the property of its owner.

Quality Engineering Test Report

SERIES: MPS-30 **30W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY**

SAMPLE: A. MPS-30-5V :5V/5A **B. MPS-30-12V :12V/2.5A** **C. MPS-30-15V :15V/2A**

D. MPS-30-24V :24V/1.2A **E. MPS-30-27V :27V/1.1A** **F. MPS-30-48V :48V/0.6A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:88~264VAC O/P:FULL LOAD	A. 62.15 V ~ 264 VAC B. 70.00 V ~ 264 VAC C. 66.03 V ~ 264 VAC D. 66.01 V ~ 264 VAC E. 70.00 V ~ 264 VAC F. 70.05 V ~ 264 VAC	P
2	LINE REGULATION	I/P:88~264VAC SPEC: A: ±1% O/P:FULL LOAD B: ±1% C: ±0.5% D: ±0.5% E: ±0.5% F: ±0.5%	A. +0.00% ~ +0.119% B. -0.05% ~ +0.00% C. -0.04% ~ +0.00% D. -0.024% ~ +0.00% E. -0.022% ~ +0.00% F. -0.025% ~ +0.00%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±2% O/P:MIN. TO FULL LOAD B: ±1% C: ±1% D: ±1% E: ±1% F: ±1%	A. -0.238 % ~ +0.357 % B. -0.05 % ~ +0.05 % C. -0.04 % ~ +0.04 % D. -0.024 % ~ +0.024 % E. -0.022 % ~ +0.022 % F. -0.012 % ~ +0.012 %	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:88~264VAC SPEC: A: ±3% B: ±3% C: ±3% D: ±3% E: ±3% O/P:0% TO FULL LOAD F: ±2%	A. -0.49 % ~ +0.118 % B. -0.208 % ~ +0.0499 % C. -0.04 % ~ +0.00 % D. -0.078 % ~ +0.049 % E. -0.044 % ~ +0.00 % F. -0.039 % ~ +0.012 %	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: A: 80mV B: 120mV C: 150mV D: 240mV E: 240mV O/P:FULL LOAD F: 240mV	A: 9 mV B: 14 mV C: 13 mV D: 12 mV E: 12 mV F: 60 mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC:0.5A O/P:FULL LOAD	A: 0.303 A B: 0.346 A C: 0.337 A D: 0.323 A E: 0.33 A F: 0.318 A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC35A O/P: FULL LOAD	A: 28.8A B: 27.648A C: 23.265A D: 27.56A E: 25.062A F: 26.47A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A: 4.85V~5.15V O/P:MIN. LOAD B: 11.64V~12.36V C: 14.55V~15.45V D: 23.28V~24.72V E: 26.17V~27.81V F: 47.04V~48.96V	A. 5.032 V B. 12.003 V C. 14.925 V D. 24.135 V E. 27.22 V F. 47.94 V	P
9	SET UP TIME	I/P:230VAC SPEC:500mS O/P:FULL LOAD	A: 311.76mS B: 311.9mS C: 357.32mS D: 389.07mS E: 326.76mS F: 254.51mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:50mS O/P:FULL LOAD	A: 91.73mS B: 80.69mS C: 83.07mS D: 90.29mS E: 87.2mS F: 90.81mS	P

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
11	RISE TIME	I/P:230VAC O/P:FULL LOAD SPEC:30mS	A: 5.23mS B: 2.385mS C: 2.575mS D: 5.166mS E: 6.24mS F: 5.945mS	P
12	EFFICIENCY	I/P:230VAC O/P:FULL LOAD SPEC: A:72% B:75% C:76% D:77% E:78% F:78%	A: 74.51% B: 75.57% C: 77.29% D: 78.89% E: 79.02% F: 79%	P
13	OVER LOAD PROTECTION	I/P:230VAC O/P:TESTING SPEC: ABOVE 105%	A: 300% B: 257% C: 265% D: 271% E: 286% F: 305%	P
14	OVER VOLTAGE PROTECTION	I/P:230VAC O/P: 0% LOAD SPEC:110%~135% A:5.5V~6.75V B:13.2V~16.2V C:16.5V~20.25V D:26.4V~32.4V E:29.7V~36.45V F:52.8V~64.8V	A: 5.9 V B: 13.8 V C: 18.8 V D: 29.6 V E: 34.2 V F: 57.7 V	P
15	GROUND LEAKAGE CURRENT	I/P:264VAC SPEC: L-FG--<0.3mA N-FG--<0.3mA	A: L-FG: 0.168 mA, N-FG: 0.168 mA B: L-FG: 0.134 mA, N-FG: 0.13 mA C: L-FG: 0.159 mA, N-FG: 0.158 mA D: L-FG: 0.128 mA, N-FG: 0.129 mA E: L-FG: 0.13 mA, N-FG: 0.13 mA F: L-FG: 0.162 mA, N-FG: 0.16 mA	P
16	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100MOhms MIN. I/P-FG: 500VDC/100MOhms MIN. O/P-FG: 500VDC/100MOhms MIN.	A: TEST OK B: TEST OK C: TEST OK D: TEST OK E: TEST OK F: TEST OK	P
17	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 4KVAC/ 1 min. I/P - FG: 1.5KVAC/ 1 min. O/P -FG: SHORT	A: I/P-O/P: 3.1 mA, I/P-FG: 1.964 mA, O/P-FG: ---- mA B: I/P-O/P: 4.2 mA, I/P-FG: 1.7 mA, O/P-FG: ---- mA C: I/P-O/P: 2.9 mA, I/P-FG: 1.7 mA, O/P-FG: ---- mA D: I/P-O/P: 3.8 mA, I/P-FG: 1.6 mA, O/P-FG: ---- mA E: I/P-O/P: 4.2 mA, I/P-FG: 1.6 mA, O/P-FG: ---- mA I/P-O/P: 2.9 mA	P

			F:	I/P-FG:	1.8	mA	
				O/P-FG:	----	mA	

PREVIOUS NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th colspan="2"></th><th>VERDICT</th></tr>
<tr><td>18</td><td>BURN-IN TEST</td><td colspan="2">I/P: 230VAC O/P: FULL LOAD
TA:26.8°C BURN-IN DURATION : 15 hrs
A:NON BREAK</td><td>P</td></tr>
<tr><td>19</td><td>ENVIRONMENT TEST
(SAMPLE A:)</td><td colspan="2">HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:51.9°C
AFTER 8 hrs
NON BREAK</td><td>P</td></tr>
<tr><td>20</td><td>TEMPERATURE RISE
TEST Trise OF PARTS</td><td colspan="2">A: I/P :230VAC AFTER 15 hr BURN-IN
O/P :FULL LOAD TA:26.8°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>Trise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>53.1°C</td><td>26.3°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER WIRE</td><td>75.4°C</td><td>48.6°C</td></tr>
<tr><td></td><td>D7</td><td>O/P DIODE</td><td>74.1°C</td><td>47.3°C</td></tr>
<tr><td></td><td>C52</td><td>O/P FILTER CAPACITOR</td><td>69.0°C</td><td>42.2°C</td></tr>
<tr><td></td><td>C5</td><td>I/P FILTER CAPACITOR</td><td>53.7°C</td><td>26.9°C</td></tr>
<tr><td></td><td>LF1</td><td>I/P FILTER TRANSFORMER</td><td>40.9°C</td><td>14.1°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>21</td><td>CRITICAL
COMPONENT
RECORD
(FOR QC
INSPECTION
REFERENCE ONLY)</td><td colspan="3">A: FUSE :2.5A/250V
BRIDGE DIODE :KBP208G 2A/800V
TRANSFOMER TF813-R1 EFD-30
OUTPUT DIODE :YG802C03R 10A/30V
OUTPUT CAPACITOR :RUBYCON 1000u/10V ZL
INPUT CAPACITOR :68u/400V 105°C
P.C.B :MPS-30-R1 FR-4 20Z DS</td></tr>
<tr><td>22</td><td>LIFE CYCLE</td><td colspan="2">A: SUPPOSE C52 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:22.4°C TC52:69.4℃ Life: 30347hrs
I/P:230VAC O/P:FULL LOAD Ta:51.9°C TC52:87.9℃ Life: 22984hrs</td><td>P</td></tr>
<tr><th>DATE</th><th>SAMPLE</th><th>TEST RESULT</th><th>TEST</th><th>APPROVAL</th></tr>
<tr><td>20020301</td><td>RD SAMPLE</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
<tr><td>20020620</td><td>PRODUCT SAMPLE
A203A33
5,12,15,24,27,48V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
<tr><td>20020726</td><td>PRODUCT SAMPLE
A207A04
12,15,24,27,48V</td><td>PASS</td><td>VINCENT</td><td>MAX LIN</td></tr>
</table>

PREVIOUS